AMENDMENTS TO THE CLAIMS

1. (Original) A method for fabricating a tridimensional solid object by sintering inorganic particles with a controlled size distribution, characterized in that at least one powdery stream of the said particles and at least one heating flux are simultaneously directed onto a rigid target area while an at least bidimensional relative movement is maintained between the target area, the powdery stream and the heating flux, where:

— the powdery stream is contained in a conical surface having as its axis (Z) the direction of the heating flux and its vertex (P) onto said target area, and

— the width of the heating flux is correlated to the dimensional distribution of the particles in the powdery stream, so that the width of the heating flux on the target area is not smaller than the majority in weight of the particles size distribution, with the result that the particles sinterization occurs in a single operation directly onto the target area.

2-7. (Cancelled)

8. (Previously Presented) A method for fabricating a tridimensional solid object according to claim 1, characterized in that the powdery stream is directed onto the target area at a speed not exceeding 20 m/s.

9-30. (Cancelled)

31. (New) A method for fabricating a tridimensional solid object by sintering inorganic particles with a controlled size distribution, the method comprising:

simultaneously directing at least one powdery stream of the inorganic particles and at least one heating flux onto a rigid target area; and

maintaining at least bidimensional relative movement between the rigid target area, the powdery stream, and the heating flux during said directing operation,

wherein the powdery stream is shaped as a cone with a vertex angle of the cone not exceeding 45°, the powdery stream being directed such that a longitudinal axis extends in a direction of the heating flux and a vertex of the cone is disposed on the rigid target area,

wherein a dimensional distribution of the inorganic particles is selected such that about 90% by weight of the inorganic particles are 0.5 to 20 μm in size,

wherein the inorganic particles are composed of agglomerated crystallites of less than 10^{-7} m in size,

wherein said powdery stream includes the inorganic particles mixed with at least one carrier gas so as to constitute a solid aerosol,

wherein the heating flux has a width on the rigid target area not exceeding 20 μm,

wherein the inorganic particles are composed of at least two phases:

a first phase which constitutes 85% or less of the powdery stream by volume, the first phase having a first melting temperature in degrees Celsius; and

at least one other phase, the at least one other phase constituting at least 15% by volume of the powdery stream and having a melting temperature in degrees Celsius which is lower than 80% of the first melting temperature, and

wherein the solid object is fabricated by sintering the inorganic particles directly onto the rigid target area such that only the inorganic particles of the at least one other phase are melted.

32. (New) The method of claim 31, wherein the powdery stream is directed onto the rigid target area at a speed not exceeding 20 m/s.

33. (New) The method of claim 31, wherein the rigid target area comprises a rigid substrate positioned onto a rigid base, the rigid base being movably supported in a forming chamber,

wherein the forming chamber extends below the rigid base in the form of a cup which is maintained at a controlled atmosphere with an oxygen content not exceeding 100 ppm through a depression created in the forming chamber.

34. (New) The method of claim 31, wherein the inorganic particles are prevented from agglomerating and adhering during flow before being directed onto the target area by means of ultrasounds.

35. (New) The method of claim 31, wherein fabrication is entirely controlled by a CAD/CAM system.

36. (New) The method of claim 31, wherein the heating flux consists of a cone-shaped laser beam having a vertex angle less than the vertex angle of the powdery stream.

37. (New) The method of claim 36, further comprising:

increasing a focus diameter of the laser beam up to 150 μm and correspondingly increasing the size of the inorganic particles in the powdery stream when a spatial resolution of the solid object better than 50 μm is not required.

38. (New) The method of claim 31, wherein the heating flux is generated by a means selected from the group consisting of: an electromagnetic induction coil arranged coaxially to the powdery stream, a radiant heat generator, an infrared heater, an electron beam, and a microwave generator.

39. (New) The method of claim 31, further comprising a step of isostatic pressing at high temperature to eliminate any internal residual porosity and achieve a full density in the solid object.

40. (New) The method of claim 32, wherein the heating flux consists of a cone-shaped laser beam having a vertex angle less than the vertex angle of the powdery stream.

41. (New) The method of claim 33, wherein the heating flux consists of a cone-shaped laser beam having a vertex angle less than the vertex angle of the powdery stream.

42. (New) The method of claim 34, wherein the heating flux consists of a cone-shaped laser beam having a vertex angle less than the vertex angle of the powdery stream.

43. (New) The method of claim 35, wherein the heating flux consists of a cone-shaped laser beam having a vertex angle less than the vertex angle of the powdery stream.

44. (New) The method of claim 31, wherein the solid object is fabricated in a single operation by sintering, and only the inorganic particles of the at least one other phase are melted during said single operation.

45. (New) The method of claim 31, wherein the at least two phases of the inorganic particles are directed onto the rigid target area in different selectable powdery streams.

46. (New) The method of claim 31, wherein the solid object has a spatial resolution better than 50 μm.